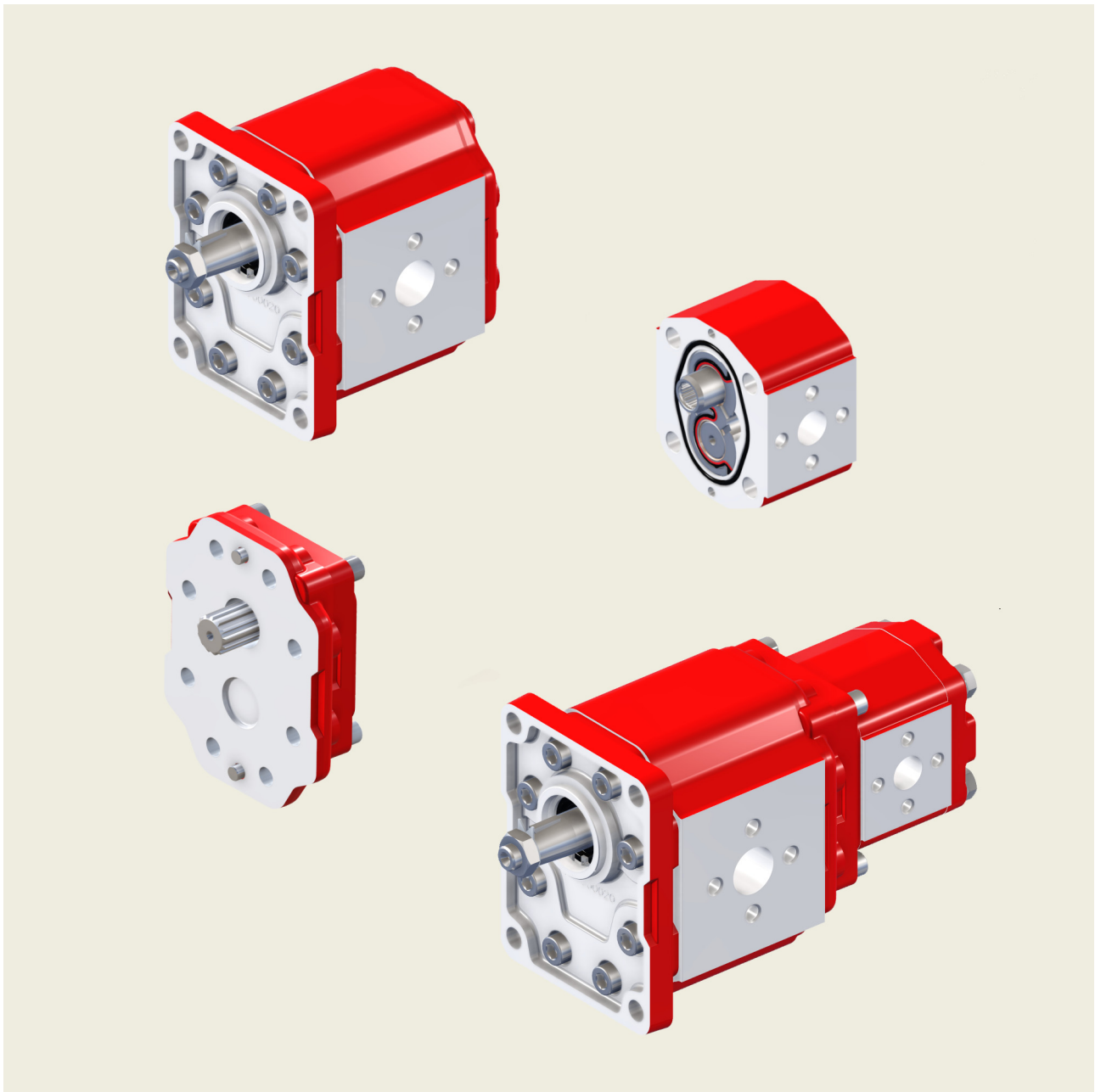


AP300 Gear Pumps

Dedicated catalogue for Dealers
(with spare parts, instructions, tandem versions Gr.3 + Gr.2)



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1 AP300 single pump technical data

Features		
Fluid temperature range (mineral oil)	NBR	-15 / +80 °C (peak: -20 / +90 °C)
Recommended fluids		hydraulic mineral oil-based
Viscosity range:	Recommended Permitted Permitted for starting	20-120 mm ² /s (cSt) up to 700 mm ² /s (cSt) 2000 mm ² /s (cSt)
Cleanliness:	recommended for operating pressure > 170 bar recommended for operating pressure < 170 bar	21/18/15 ISO 4406 22/19/16 ISO 4406
Standard seals material (valves not included)		NBR

1.1 Operating limits

AP300 Type	Displacement		Max. pressure						n min.		n max.	
	cm ³ /rev	Cu. In. P. R.	P1		P2		P3		P ≤ P1	P > P1	P ≤ P1	P > P1
			bar	P.S.I.	bar	P.S.I.	bar	P.S.I.				
AP300/27	27.0	1.674	220	3150	250	3600	280	4000	600	800	3000	3500
AP300/31	31.0	1.891	220	3150	250	3600	280	4000	600	800	3000	3500
AP300/38	38.0	2.318	220	3150	250	3600	280	4000	600	800	2500	3000
AP300/45	45.0	2.745	200	2900	230	3300	260	3700	600	800	2500	3000
AP300/53	53.0	3.233	200	2900	230	3300	260	3700	600	800	2500	3000
AP300/63	63.0	3.843	180	2600	210	3000	240	3400	550	700	2500	3000
AP300/75	75.0	4.575	170	2400	190	2700	220	3150	550	700	2000	2500
AP300/93	93.0	5.673	150	2100	170	2400	200	2900	500	650	2000	2500



Important: Please contact our Sales Department if even one of the operating limits indicated in the tables below (temperature, pressure, rpm) is exceeded, as well as in the case of two or more maximum values at the same time, or for applications with particularly heavy-duty cycles.

1.2 Pressure

Pressure levels:

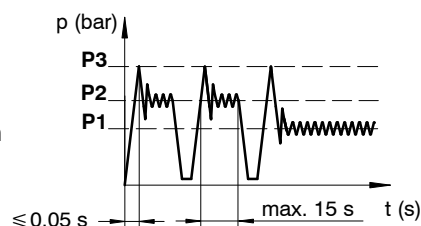
P1 = continuous pressure

P2 = intermittent pressure

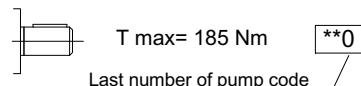
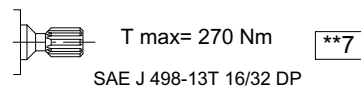
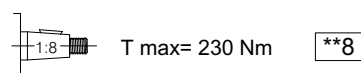
P3 = peak pressure

The recommended oil speed in the pressure pipes is:

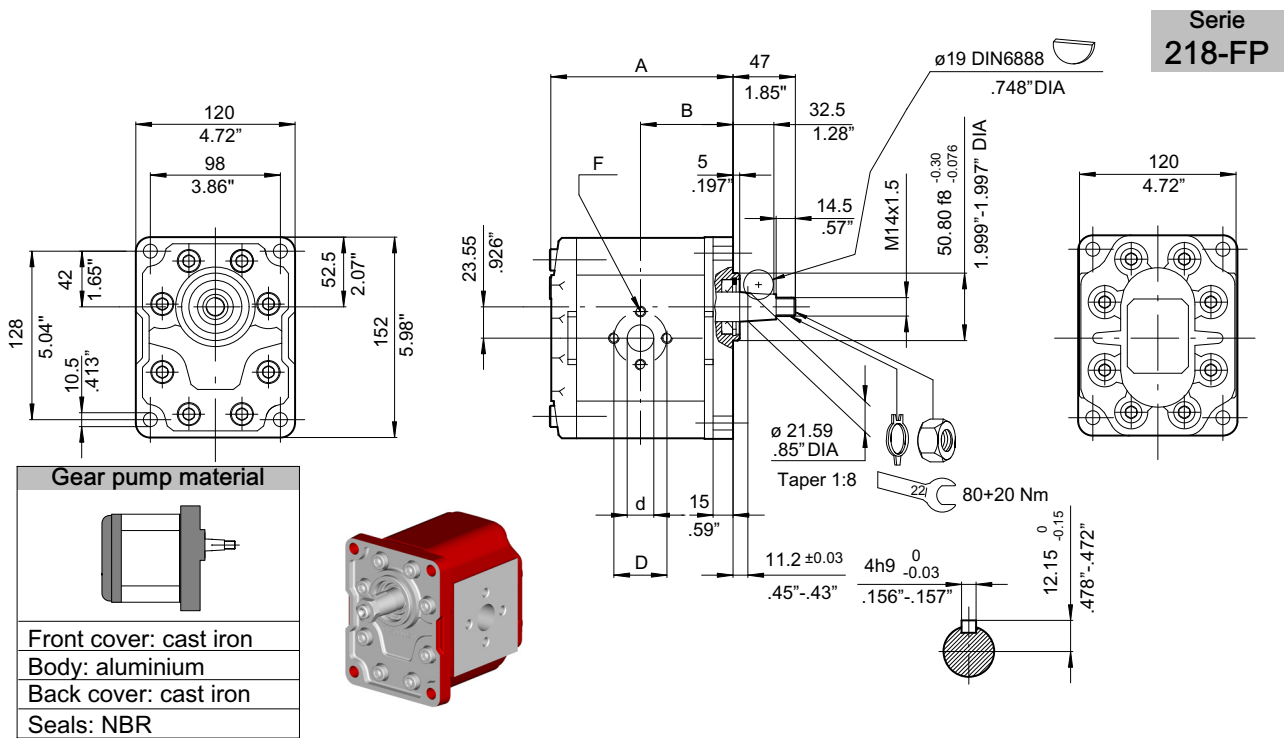
$v = 2$ to 5 m/s



Max torque allowed to the shaft



2 AP300 single pumps standard types

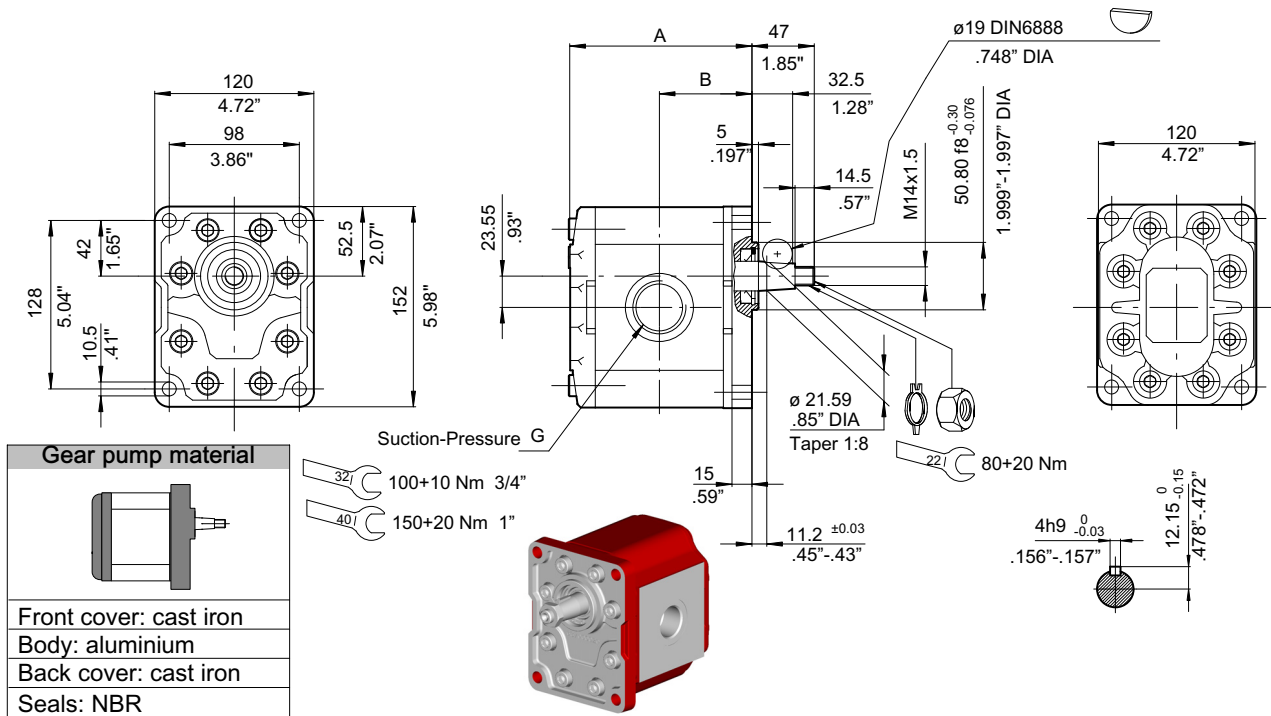


Type	Displacement cm ³ /rev	Dimensions				Suction			Pressure						
		A mm	inch	B mm	inch	d mm	inch	D mm	inch	F mm					
AP300/27	27	126.0	4.96	64.0	2.51	27	1.06	51	2.00	M10X1.5	20	.78	40	1.56	M8X1.25
AP300/31	31	129.0	5.07	65.0	2.55										
AP300/38	38	133.5	5.25	67.5	2.65										
AP300/45	45	138.5	5.43	70.0	2.75										
AP300/53	53	143.0	5.62	72.5	2.85										
AP300/63	63	150.0	5.90	75.5	2.97	31	1.22	62	2.43	M12X1.75	25	.98	51	2.00	M10X1.5
AP300/75	75	157.5	6.20	79.5	3.13										
AP300/93	93	169.0	6.65	85.5	3.36										

Clockwise rotation: D		Counter-clockwise rotation: S		
Type	Order Code	Type	Order Code	
AP300/27 D 218-FP	200103113210	AP300/27 S 218-FP	200103113309	
AP300/31 D 218-FP	200103213207	AP300/31 S 218-FP	200103213309	
AP300/38 D 218-FP	200103313205	AP300/38 S 218-FP	200103313304	
AP300/45 D 218-FP	200103413205	AP300/45 S 218-FP	200103413305	
AP300/53 D 218-FP	200103513205	AP300/53 S 218-FP	200103513305	
AP300/63 D 218-FP	200103513205	AP300/63 S 218-FP	200103613305	
AP300/75 D 218-FP	200103713205	AP300/75 S 218-FP	200103713304	
AP300/93 D 218-FP	200103813204	AP300/93 S 218-FP	200103813305	

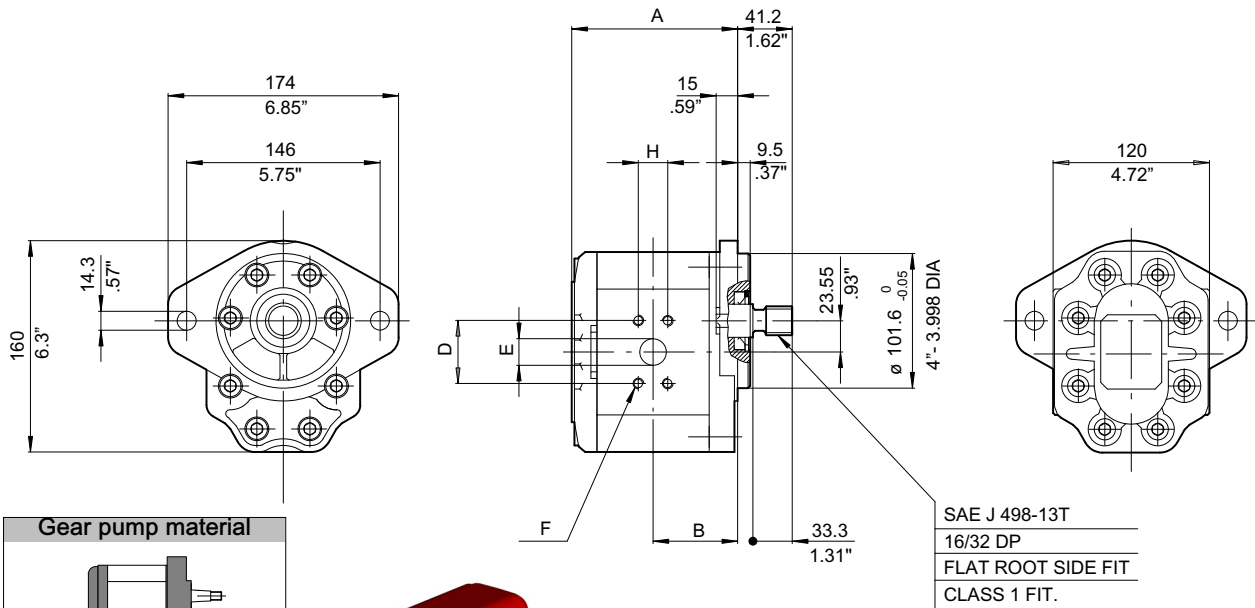
Tandem predisposal (FP gear types)
Standard front cover with NBR shaft seal
Standard end cover

Serie
818-FP



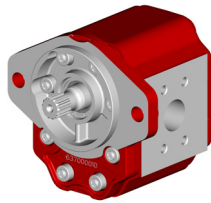
Type	Displacement cm ³ /rev	Dimensions				Suction G BSPP	Pressure G BSPP
		A		B			
		mm	inches	mm	inches		
AP300/27	27	126.0	4.96	64.0	2.51	1"	3/4"
AP300/31	31	129.0	5.07	65.0	2.55		
AP300/38	38	133.5	5.25	67.5	2.65		
AP300/45	45	138.5	5.43	70.0	2.75		
AP300/53	53	143.0	5.62	72.5	2.85		
AP300/63	63	150.0	5.90	75.5	2.97		
AP300/75	75	157.5	6.20	79.5	3.13		
AP300/93	93	169.0	6.65	85.5	3.36		

Clockwise rotation: D		Counter-clockwise rotation: S		
Type	Order Code	Type	Order Code	
AP300/27 D 818-FP	200103113211	AP300/27 S 818-FP	200103113310	Tandem predisposal (FP gear types)
AP300/31 D 818-FP	200103213208	AP300/31 S 818-FP	200103213310	Standard front cover with NBR shaft seal Standard end cover
AP300/38 D 818-FP	200103313206	AP300/38 S 818-FP	200103313305	
AP300/45 D 818-FP	200103413206	AP300/45 S 818-FP	200103413306	
AP300/53 D 818-FP	200103513206	AP300/53 S 818-FP	200103513306	
AP300/63 D 818-FP	200103613206	AP300/63 S 818-FP	200103613306	
AP300/75 D 818-FP	200103713206	AP300/75 S 818-FP	200103713305	
AP300/93 D 818-FP	200103813205	AP300/93 S 818-FP	200103813306	



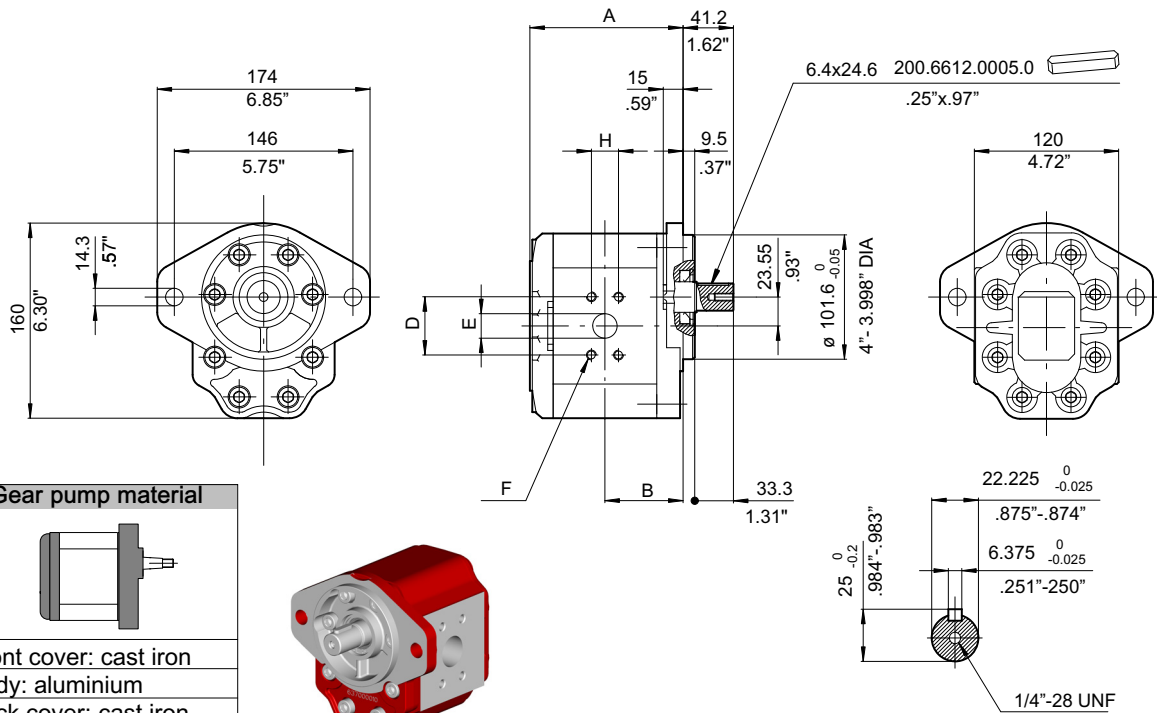
Gear pump material

Front cover: cast iron
Body: aluminium
Back cover: cast iron
Seals: NBR



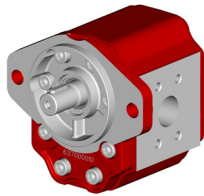
Type	Displ. cm ³ /rev	Dimensions				Suction						Pressure							
		A mm	A inch	B mm	B inch	H mm	H inch	D mm	D inch	E mm	E inch	F UNC 2B	H mm	H inch	D mm	D inch	E mm	E inch	F UNC 2B
AP300/27	27	126.0	4.96	64.0	2.51	26.2	1.03	52.4	2.06	25	.99	3/8" - 16	22.2	.88	47.6	1.88	19	.75	3/8" - 16
AP300/31	31	129.0	5.07	65.0	2.55	30.2	1.19	58.7	2.31	31	1.22	7/16" - 14	26.2	1.03	52.4	2.06	25	.99	3/8" - 16
AP300/38	38	133.5	5.25	67.5	2.65														
AP300/45	45	138.5	5.43	70.0	2.75														
AP300/53	53	143.0	5.62	72.5	2.85	35.7	1.40	70	2.76	38	1.5	1/2" - 13	30.2	1.19	58.7	2.31	31	1.22	7/16" - 14
AP300/63	63	150.0	5.90	75.5	2.97														
AP300/75	75	158.0	6.22	79.5	3.13														
AP300/93	93	169.0	6.65	85.5	3.36														

Clockwise rotation: D		Counter-clockwise rotation: S		
Type	Order Code	Type	Order Code	
AP300/27 D 287S-FP	200103186205	AP300/27 S 287S-FP	200103186304	
AP300/31 D 287S-FP	200103286203	AP300/31 S 287S-FP	200103286304	
AP300/38 D 287S-FP	200103386205	AP300/38 S 287S-FP	200103386305	
AP300/45 D 287S-FP	200103486203	AP300/45 S 287S-FP	200103486305	
AP300/53 D 287S-FP	200103586203	AP300/53 S 287S-FP	200103586306	
AP300/63 D 287S-FP	200103686204	AP300/63 S 287S-FP	200103686304	
AP300/75 D 287S-FP	200103786203	AP300/75 S 287S-FP	200103786302	
AP300/93 D 287S-FP	200103886202	AP300/93 S 287S-FP	200103886302	



Gear pump material

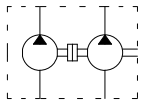
Front cover: cast iron
Body: aluminium
Back cover: cast iron
Seals: NBR



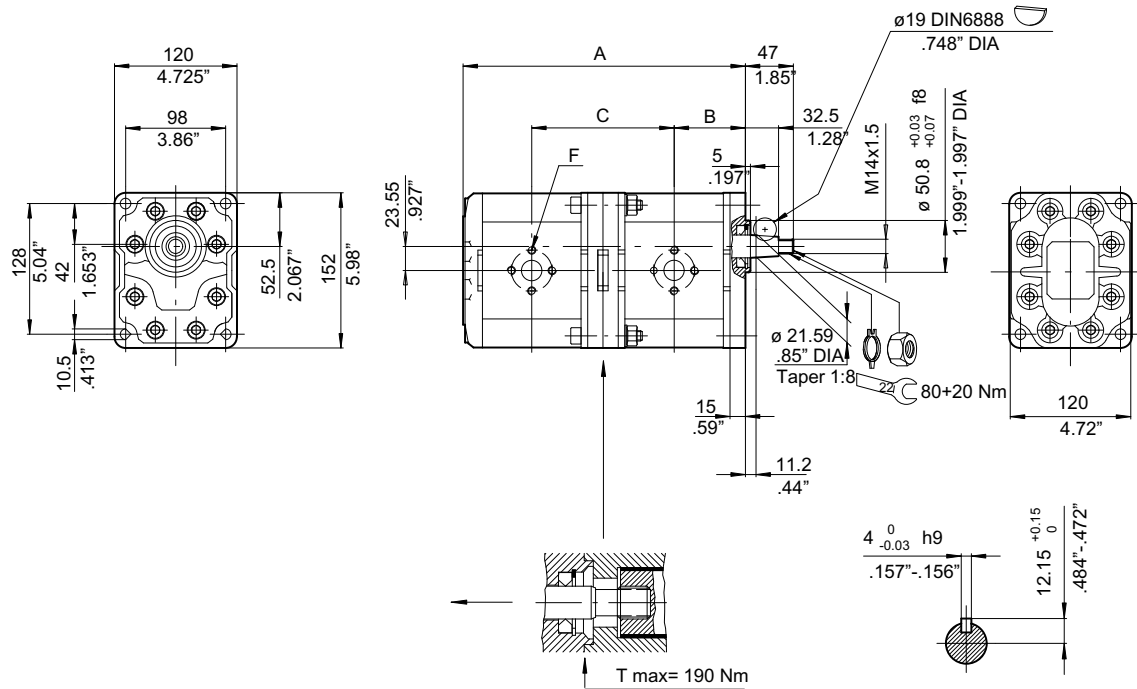
Type	Displ. cm ³ /rev	Dimensions				Suction						Pressure							
		A mm	A inch	B mm	B inch	H mm	H inch	D mm	D inch	E mm	E inch	F UNC 2B	H mm	H inch	D mm	D inch	E mm	E inch	F UNC 2B
AP300/27	27	126.0	4.96	64.0	2.51	26.2	1.03	52.4	2.06	25	.99	3/8" - 16	22.2	.88	47.6	1.88	19	.75	3/8" - 16
AP300/31	31	129.0	5.07	65.0	2.55	30.2	1.19	58.7	2.31	31	1.22	7/16" - 14	26.2	1.03	52.4	2.06	25	.99	3/8" - 16
AP300/38	38	133.5	5.25	67.5	2.65														
AP300/45	45	138.5	5.43	70.0	2.75														
AP300/53	53	143.0	5.62	72.5	2.85	35.7	1.40	70	2.76	38	1.5	1/2" - 13	30.2	1.19	58.7	2.31	31	1.22	7/16" - 14
AP300/63	63	150.0	5.90	75.5	2.97														
AP300/75	75	158.0	6.22	79.5	3.13														
AP300/93	93	169.0	6.65	85.5	3.36														

Clockwise rotation: D		Counter-clockwise rotation: S		
Type	Order Code	Type	Order Code	
AP300/27 D 280-FP	200103180203	AP300/27 S 280-FP	200103180302	
AP300/31 D 280-FP	200103280204	AP300/31 S 280-FP	200103280302	
AP300/38 D 280-FP	200103380204	AP300/38 S 280-FP	200103380302	
AP300/45 D 280-FP	200103480204	AP300/45 S 280-FP	200103480302	
AP300/53 D 280-FP	200103580204	AP300/53 S 280-FP	200103580302	
AP300/63 D 280-FP	200103680204	AP300/63 S 280-FP	200103680302	
AP300/75 D 280-FP	200103780204	AP300/75 S 280-FP	200103780302	
AP300/93 D 280-FP	200103880204	AP300/93 S 280-FP	200103880302	

3 AP300 tandem pump 300 + 300



Group AP300 + AP300
Serie
2218



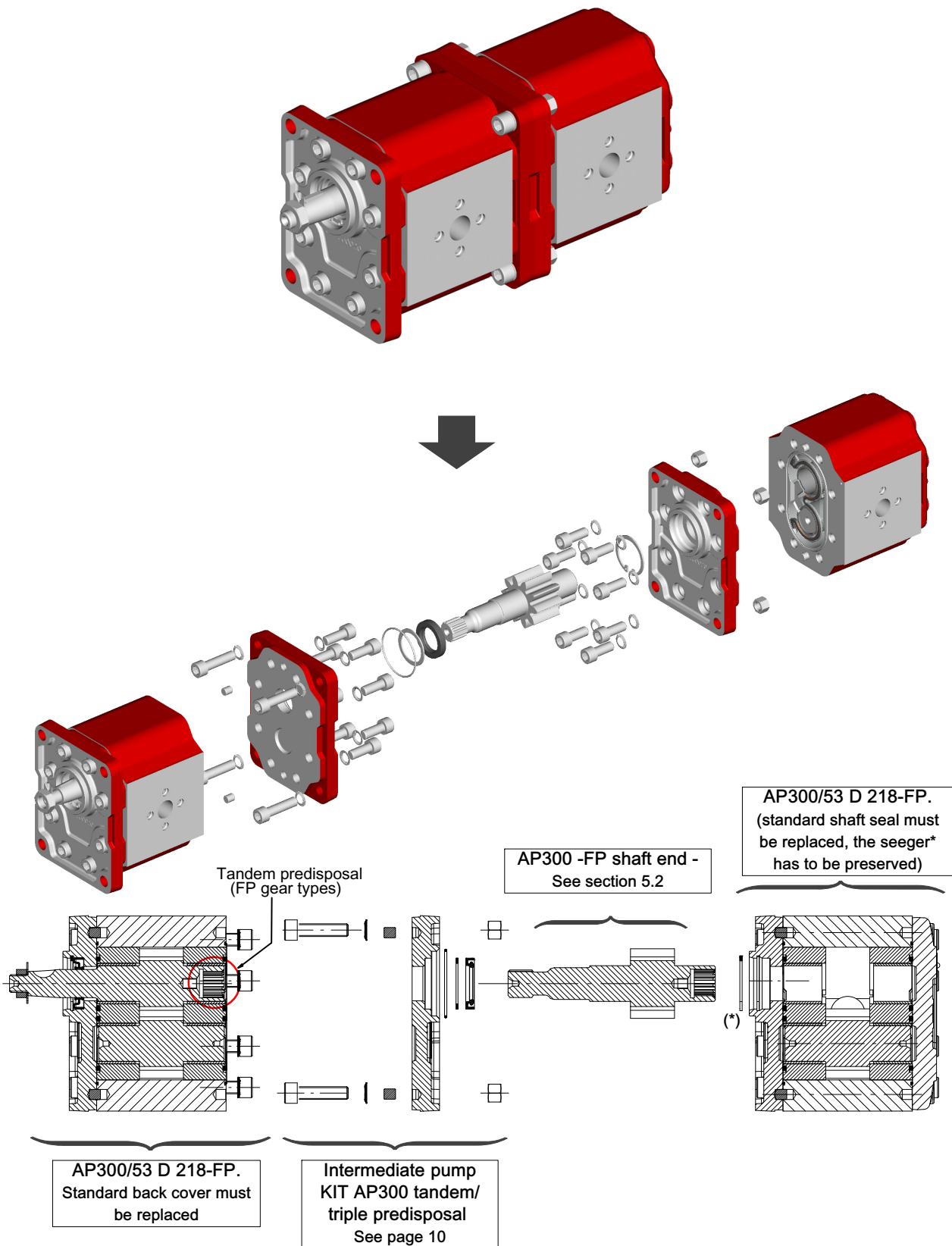
Note: With respect to the standards, the maximum pressures of some versions of this pump are reduced in relation to the max. torque allowed to the main and intermediate shafts.

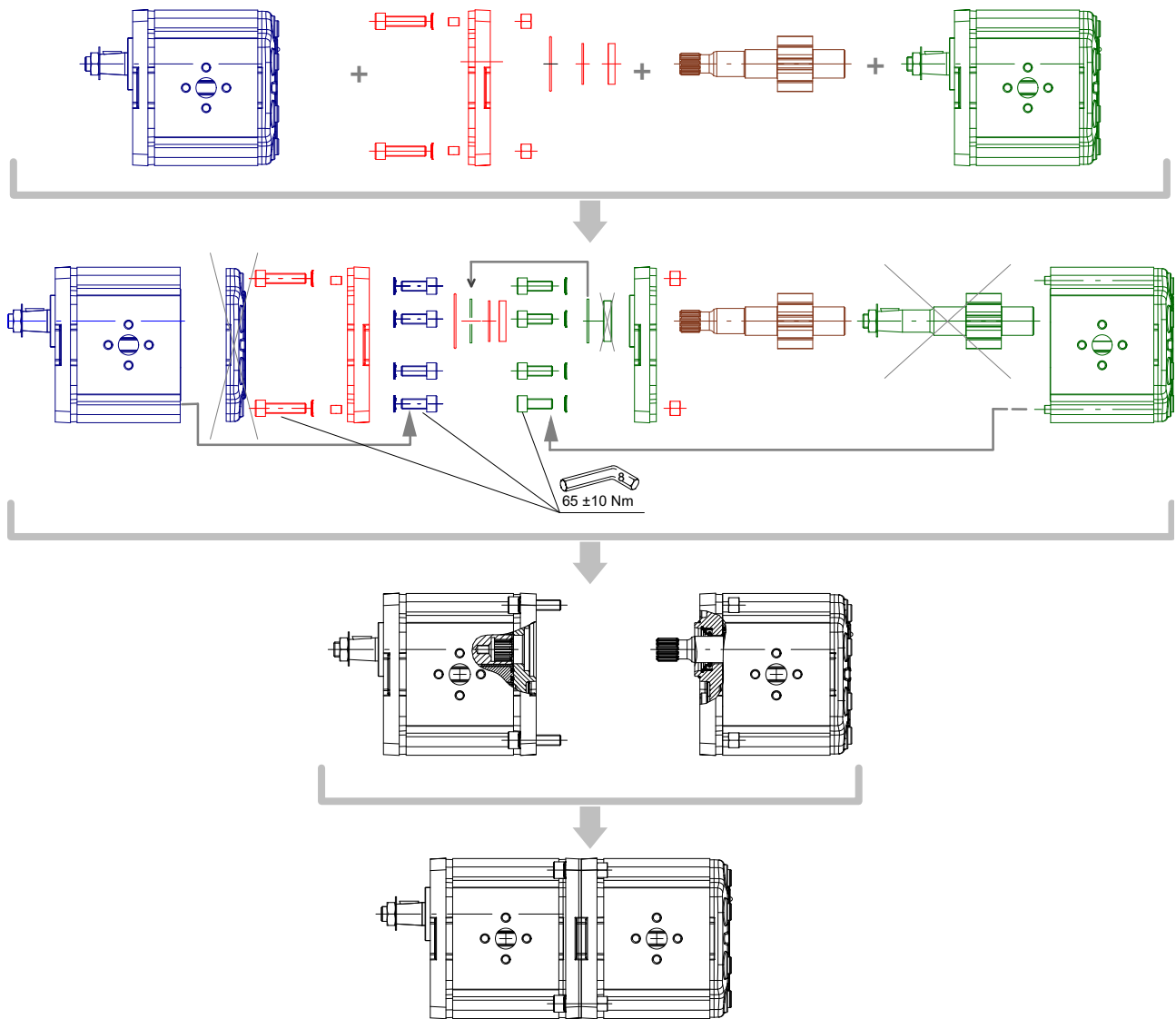
Displacement cm ³ /rev	A		B		C	
	mm	inch	mm	inch	mm	inch
27+27	254	10.00	63.8	2.51	127.5	5.02
31+27	257	10.12	65.2	2.57	129	5.08
31+31	259	10.20			130.5	5.14
38+27	261	10.27	67.5	2.66	131.5	5.18
38+31	264	10.40			132.5	5.22
38+38	269	10.60			135	5.32
45+27	266	10.00	69.8	2.75	133.5	5.26
45+31	268	10.55			135	5.31
45+38	273	10.75			137.5	5.41
45+45	278	10.95			139.5	5.50
53+27	271	10.67	72.5	2.85	136	5.36
53+31	274	10.78			137.5	5.42
53+38	278	10.94			140	5.52
53+45	283	11.14			142	5.60
53+53	288	11.34			144.5	5.69

Displacement cm ³ /rev	A		B		C	
	mm	inch	mm	inch	mm	inch
63+27	278	10.95	75.5	2.97	139.5	5.50
63+31	280	11.02			141	5.55
63+38	285	11.22			143	5.63
63+45	289	11.38			145.5	5.73
63+53	295	11.61			148	5.83
63+63	301	11.85	79.5	3.13	151	5.95
75+27	285	11.22			143.5	5.65
75+31	288	11.34			144.5	5.69
75+38	293	11.54			147	5.79
75+45	297	11.70			149.5	5.89
75+53	302	11.89			152	5.99
75+63	309	12.17			155	6.10
75+75	317	12.40	159	6.26		
93+27	297	11.70	85.5	3.37	149	5.87
93+31	300	11.80			150.5	5.93
93+38	304	11.97			153	6.02
93+45	309	12.17			155	6.10
93+53	314	12.36			157.5	6.2
93+63	321	12.64			161	6.34
93+75	328	12.91			165	6.5
93+93	340	13.39			170.5	6.72

3.1 AP300 tandem 2218 serie

How to transform single pump AP300-FP in a tandem pump with shaft seal



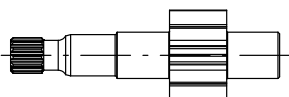


Before disassembling/re-assembling the pumps, please follow the warnings listed in the section 4.6

The length of the screws depends on the different pump displacement as well as the pump series (front and rear covers). Please consult our Sales Centre.

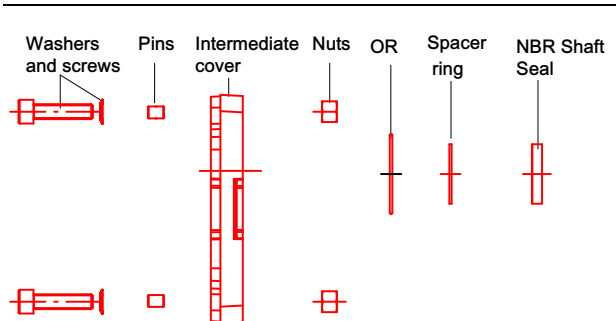
Please check if pressures/torques meet the requested operational limits.

See section 5.2



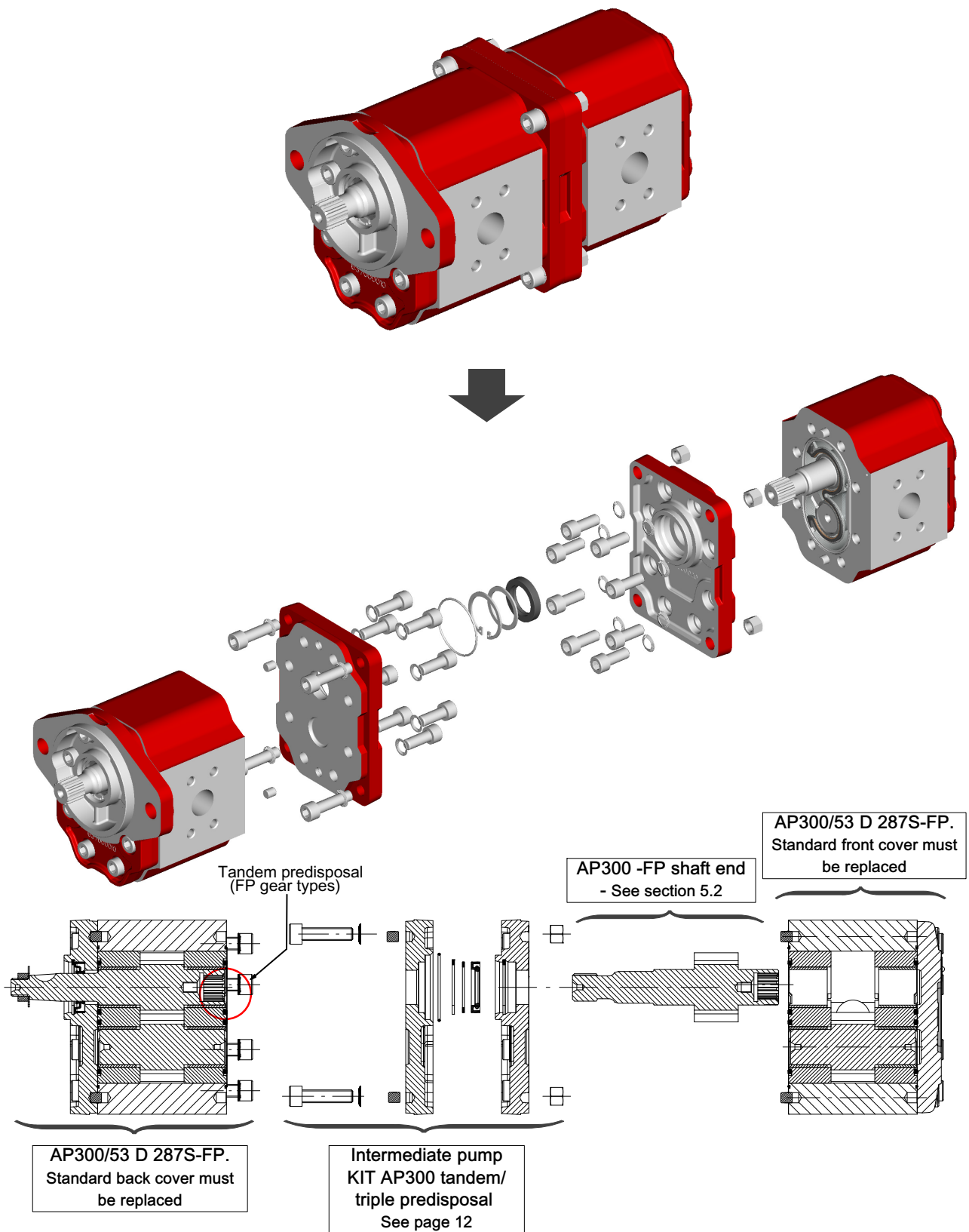
Interface kit AP300 218-MPS code

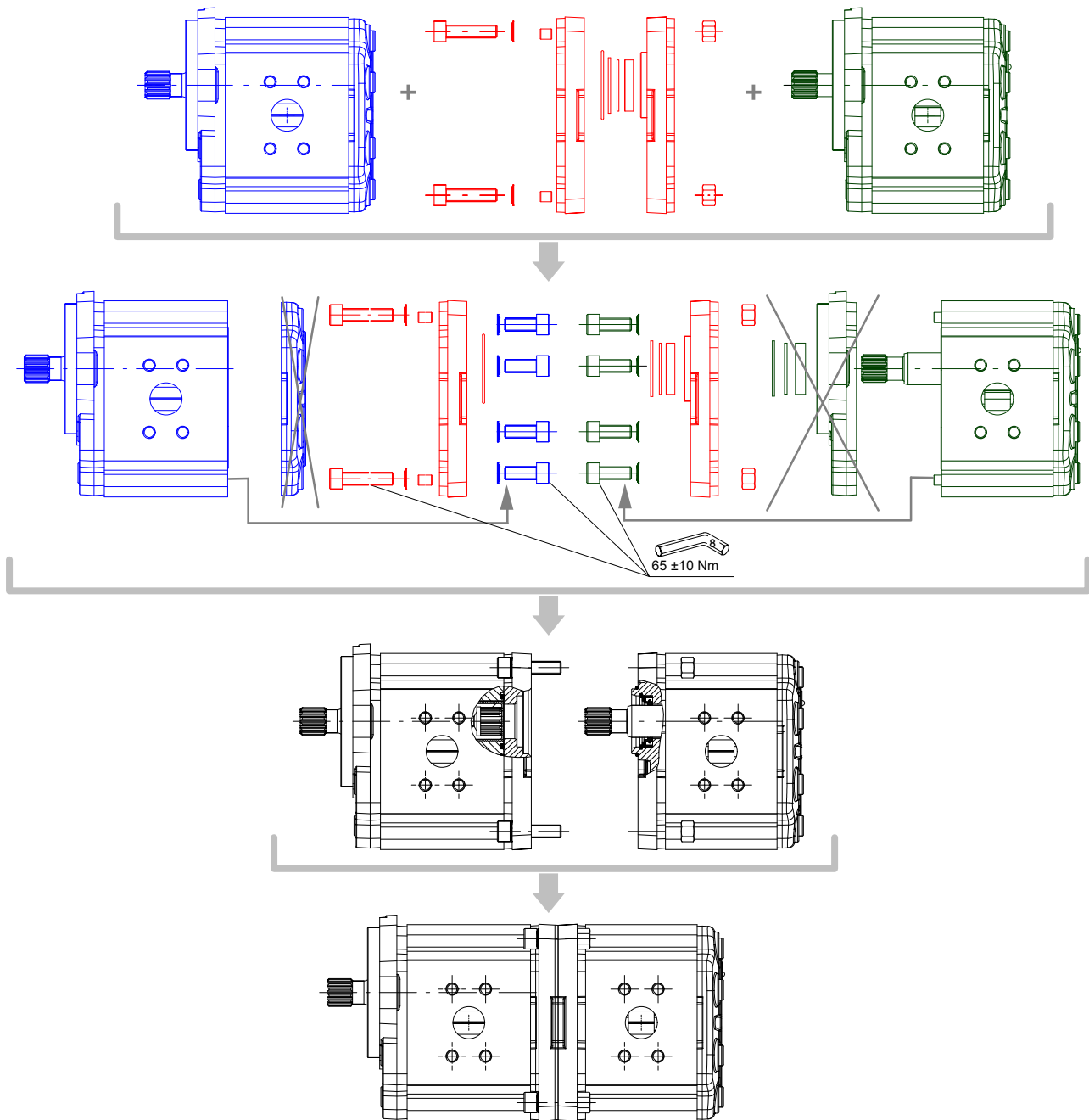
200971900560



3.2 AP300 tandem 2287S series

How to transform single pump AP300-FP in a tandem pump with shaft seal





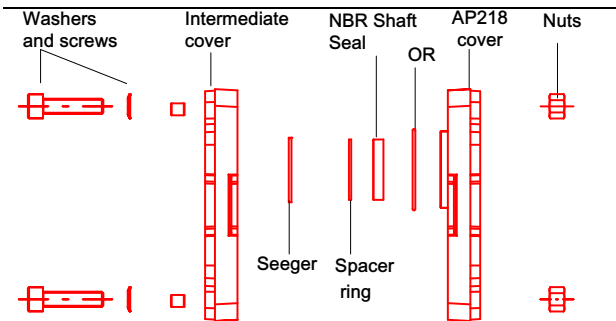
Before disassembling/re-assembling the pumps, please follow the warnings listed in the section 4.6

The length of the screws depends on the different pump displacement as well as the pump series (front and rear covers). Please consult our Sales Centre.

Please check if pressures/torques meet the requested operational limits.

Interface kit AP300 287S-MPS code

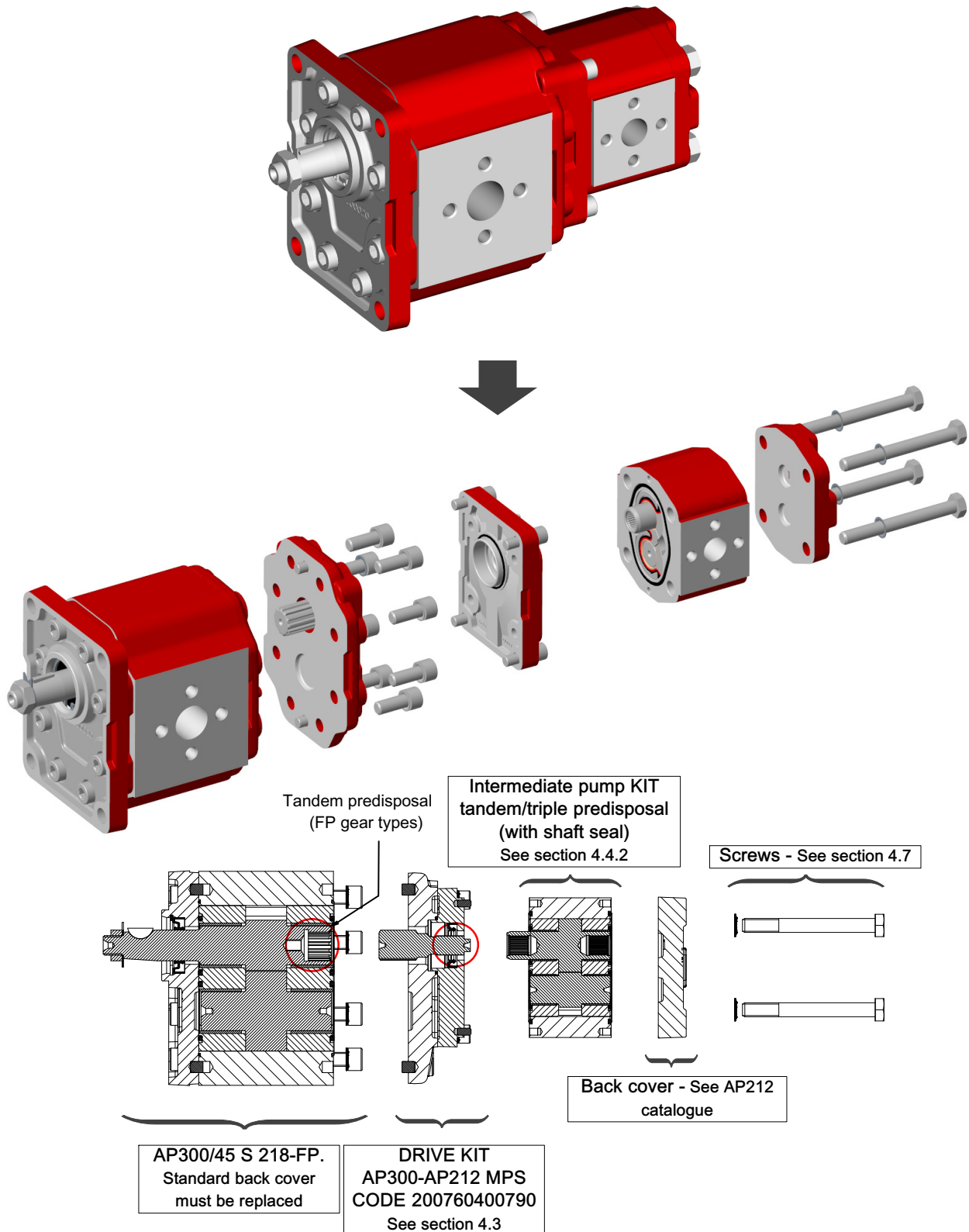
200971900570

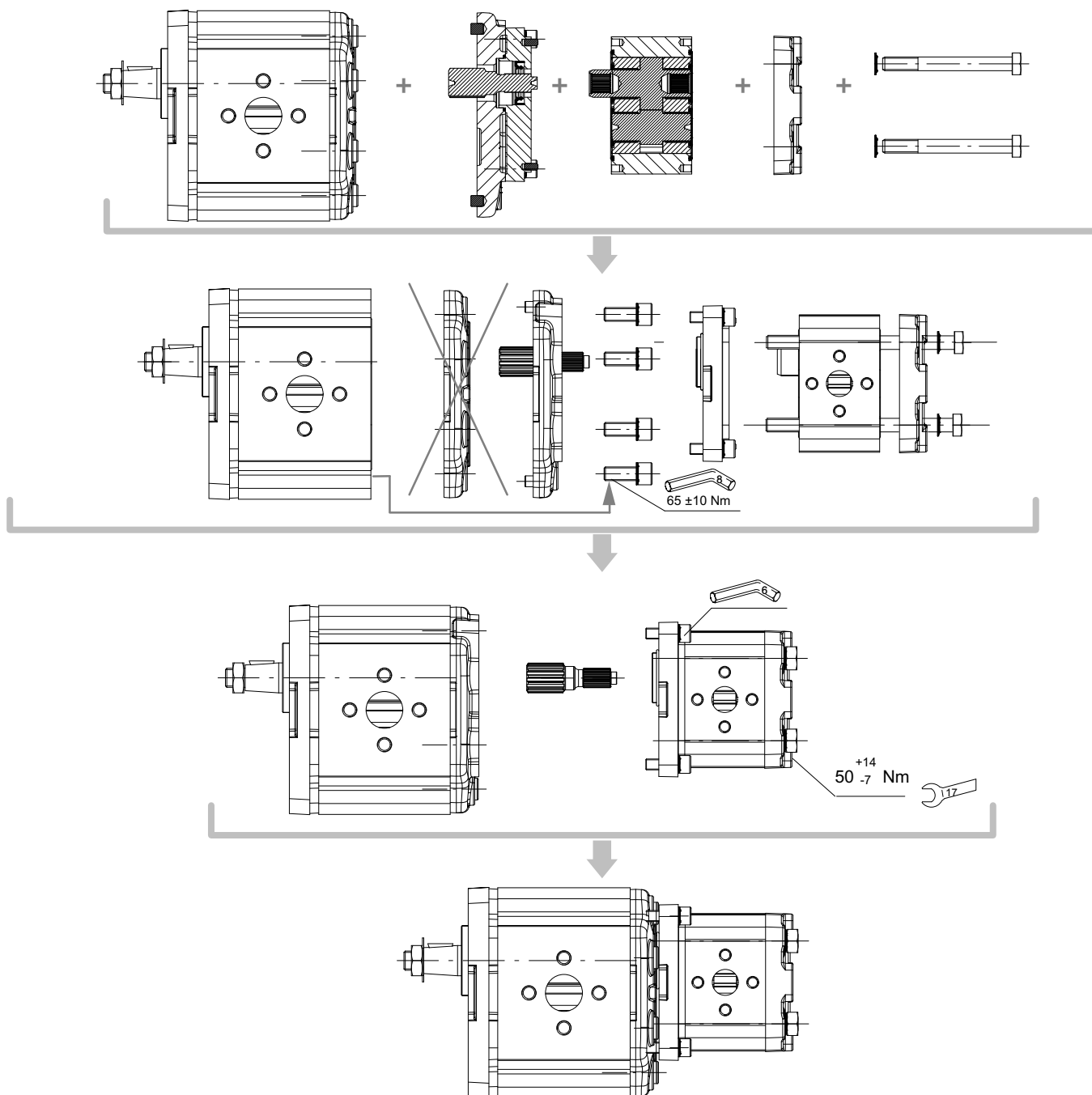


4 AP300 tandem pump 300 + 212

4.1 AP300-FP + AP212-MPS

How to transform single pump AP300-FP in a tandem pump with shaft seal





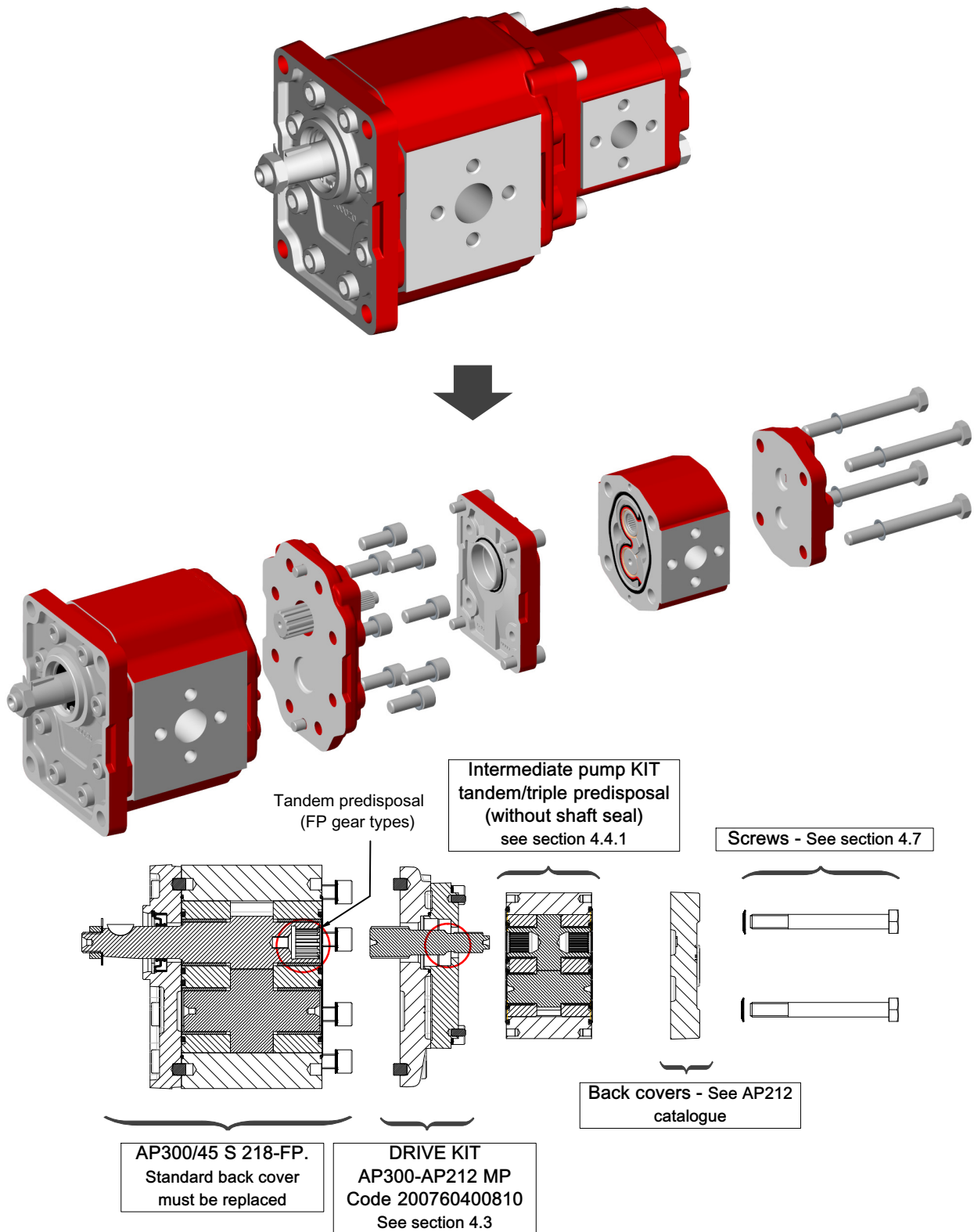
Before disassembling/re-assembling the pumps, please follow the warnings listed in the section 4.6

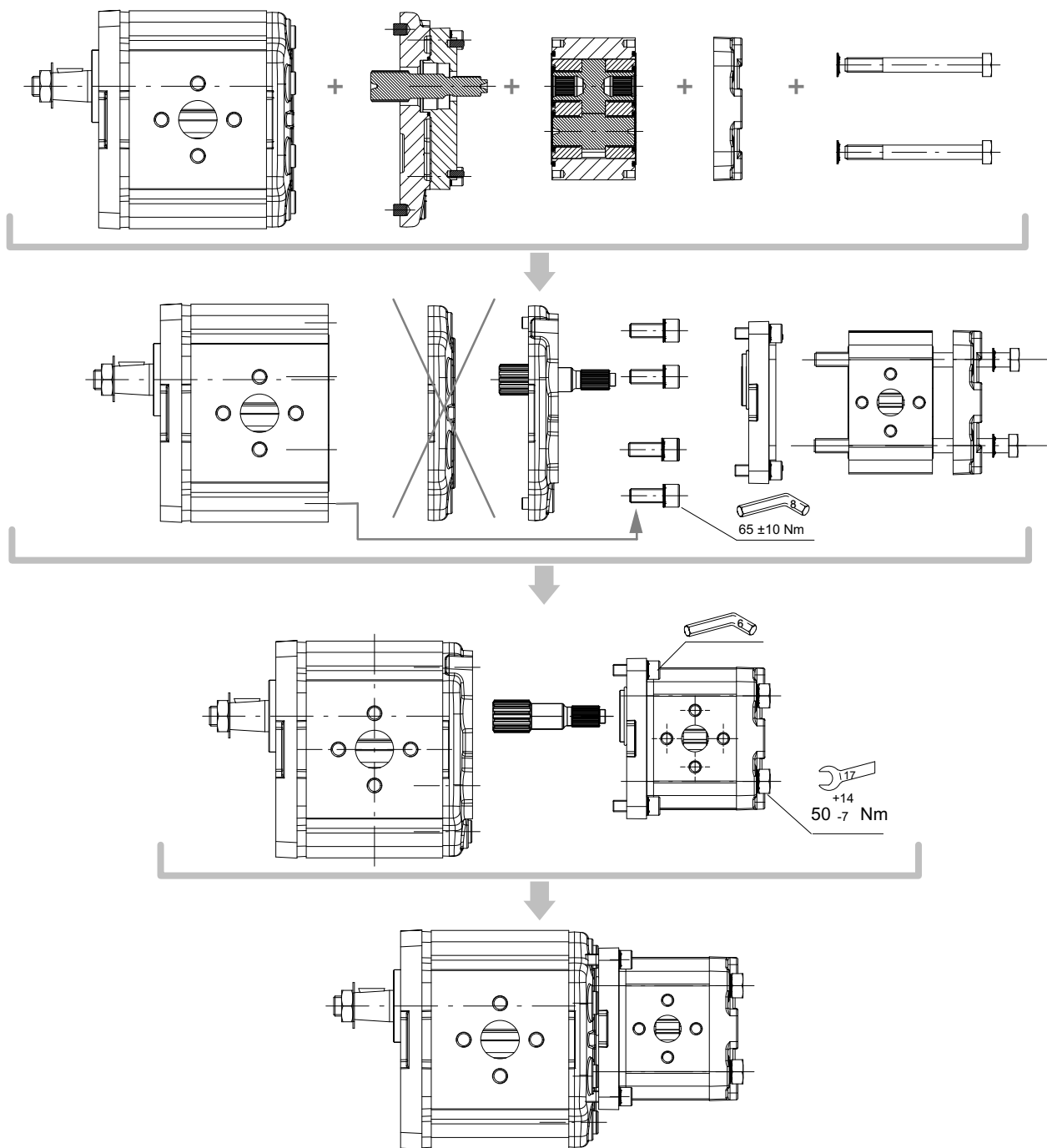
The length of the screws depends on the different pump displacement as well as the pump series (front and rear covers). Please consult our Sales Centre.

Please check if pressures/torques meet the requested operational limits.

4.2 AP300-FP + AP212-MP

How to transform single pump AP300-FP in a tandem pump without shaft seal





Before disassembling/re-assembling the pumps, please follow the warnings listed in the section 4.6

The length of the screws depends on the different pump displacement as well as the pump series (front and rear covers). Please consult our Sales Centre.

4.3 Interface kit for multiple pumps AP300-FP + AP212-MP/MPS

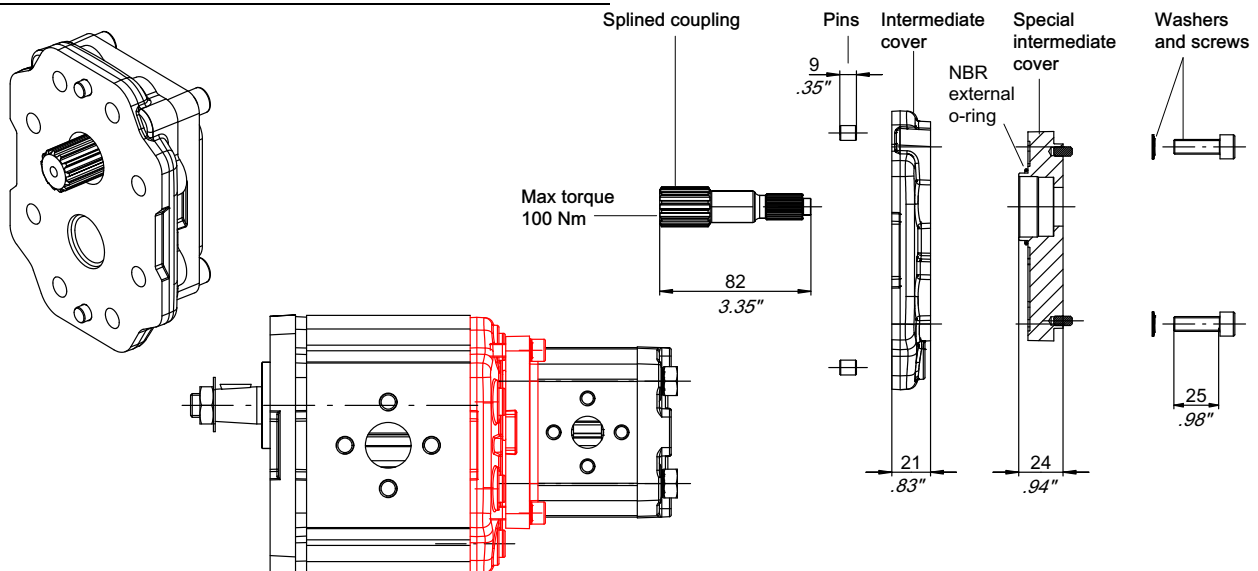
In the next pages single components and sub-assembly kits are shown; they are useful to assemble different kinds

of single or multiple pumps. Please read with attention the important notes related to the assembly phase.

4.3.1 Tandem without shaft seal

Interface kit AP212-MP code

200960400810

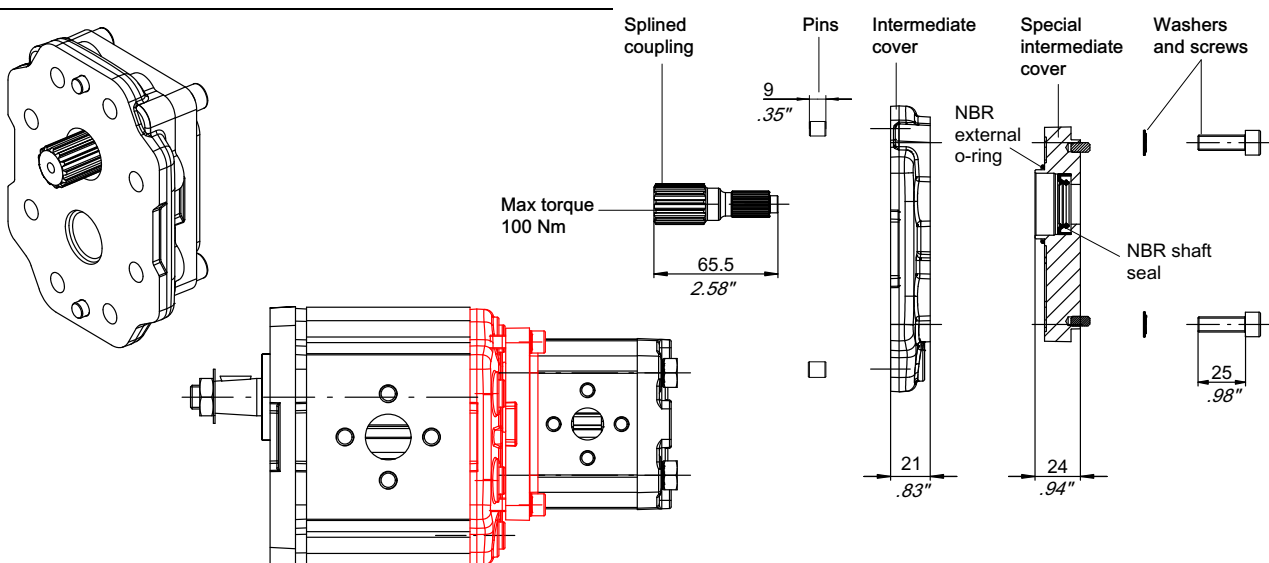


Note: With respect to the standards, the maximum pressures of some versions of this pump are reduced in relation to the max. torque allowed to the mains and intermediate shafts.

4.3.2 Tandem with shaft seal

Interface kit AP212-MPS code

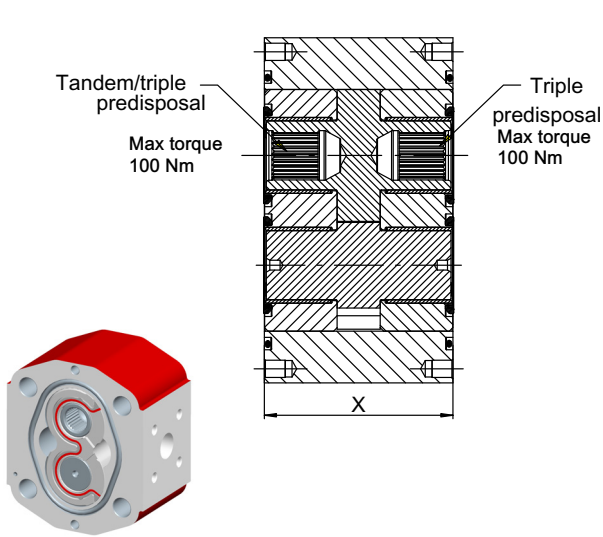
200960400790




Note: With respect to the standards, the maximum pressures of some versions of this pump are reduced in relation to the max. torque allowed to the mains and intermediate shafts.

4.4 Intermediate body KIT AP212-MP/MPS tandem/triple predisposal

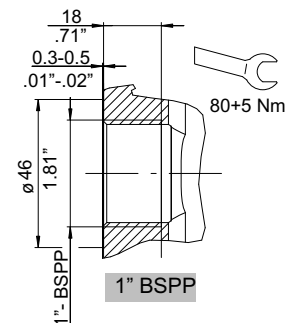
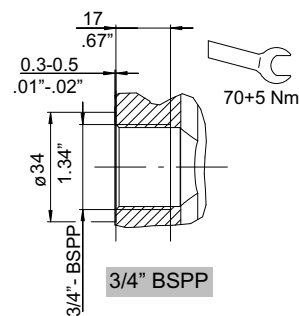
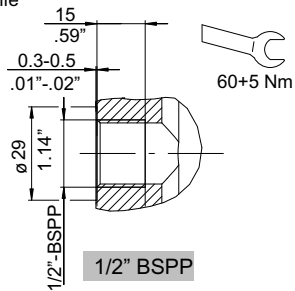
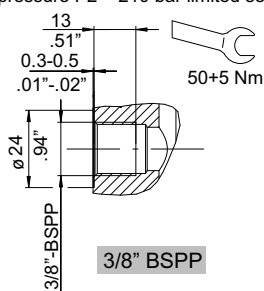
4.4.1 Without shaft seal



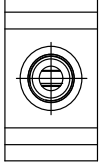
Displacement cm ³ /rev	X	
	mm	inch
4.5	48.6	1.91
6.5	51.6	2.03
8.5	54.6	2.15
11	58.6	2.31
15	64.6	2.54
19	70.6	2.78
22	75	2.95
26	81	3.19

Port type	Suction	Pressure	Description*	Ordering code (without shaft seal)
 BSPP threaded ports	3/8"	3/8"	AP212/4,5 S 4A-MP	200948910010
	3/8"	3/8"	AP212/6,5 S 4A-MP	200948920010
	3/8"	3/8"	AP212/8,5 S 4A-MP	200948930010
	1/2"	3/8"	AP212/11 S 4B-MP	200948940010
	1/2"	3/8"	AP212/15 S 4B-MP	200948950010
	3/4"	1/2"	AP212/19 S 4C-MP	200948960010
	3/4"	1/2"	AP212/22 S 4C-MP	200948970010
	3/4"	1/2"	AP212/26 S 4C-MP	200948980010

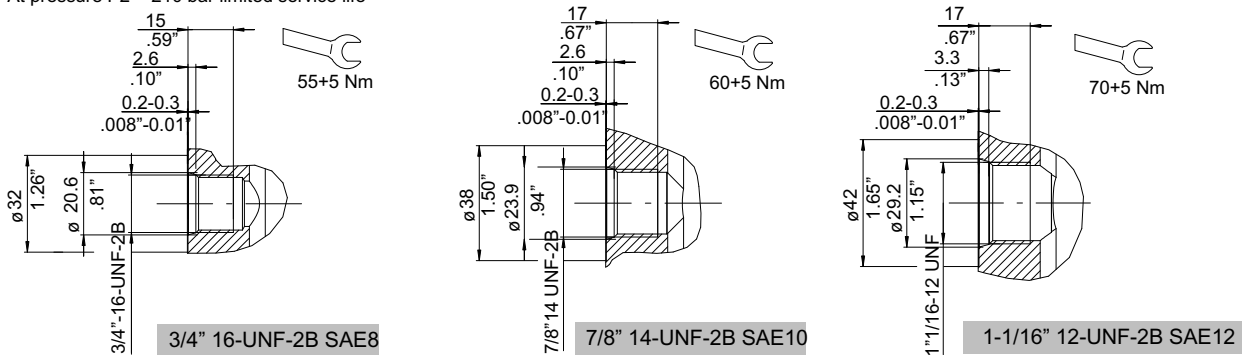
At pressure P2 > 210 bar limited service life




* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

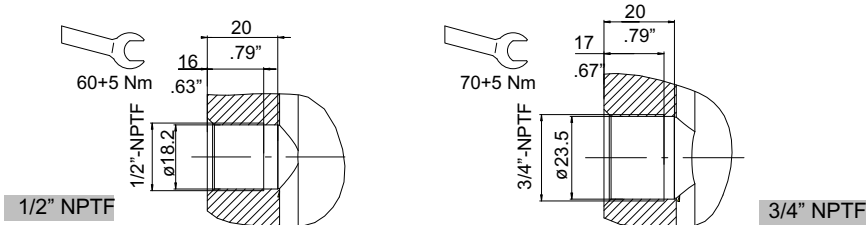
Port type	Suction	Pressure	Description*	Ordering code (without shaft seal)
 SAE threaded ports	1-1/16" 12UNF (SAE12)	7/8" 14UNF (SAE10)	AP212/4,5 S 8A-MP	200948910020
			AP212/6,5 S 8A-MP	200948920020
			AP212/8,5 S 8A-MP	200948930020
			AP212/11 S 8A-MP	200948940020
			AP212/15 S 8A-MP	200948950020
			AP212/19 S 8A-MP	200948960020
			AP212/22 S 8A-MP	200948970020
			AP212/26 S 8A-MP	200948980020

At pressure P2 > 210 bar limited service life

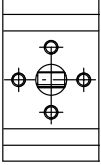


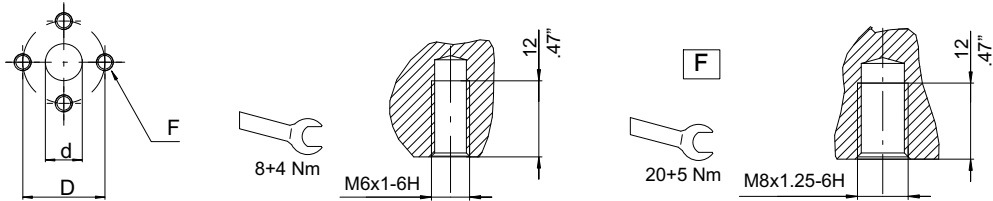
Port type	Suction	Pressure	Description*	Ordering code (without shaft seal)
 NPTF threaded ports	1/2"	1/2"	AP212/4,5 S 6A-MP	200948910030
			AP212/6,5 S 6A-MP	200948920030
			AP212/8,5 S 6A-MP	200948930030
	3/4"	1/2"	AP212/11 S 6B-MP	200948940030
			AP212/15 S 6B-MP	200948950030
			AP212/19 S 6B-MP	200948960030
			AP212/22 S 6B-MP	200948970030
			AP212/26 S 6B-MP	200948980030

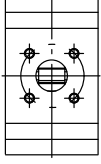
At pressure P2 > 210 bar limited service life

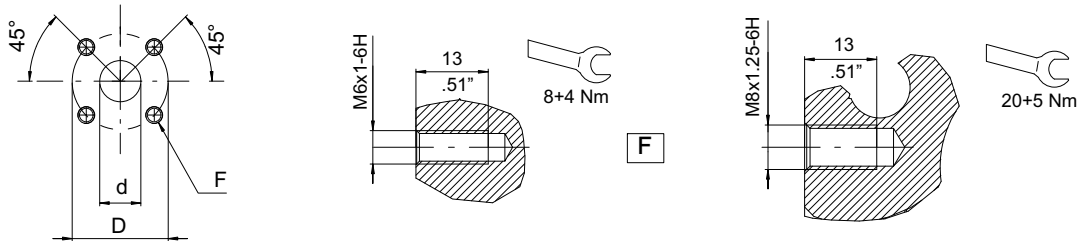


* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

Port type	Suction	Pressure	Description*	Ordering code (without shaft seal)
	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	AP212/4,5 S 3A-MP	200948910040
			AP212/6,5 S 3A-MP	200948920040
			AP212/8,5 S 3A-MP	200948930040
	19 - .75 (d) 40 - 1.58 (D) M8 (F)	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	AP212/11 S 3B-MP	200948940040
			AP212/15 S 3B-MP	200948950040
	19 - .75 (d) 40 - 1.58 (D) M8 (F)	19 - .75 (d) 40 - 1.58 (D) M8 (F)	AP212/19 S 3C-MP	200948960040
			AP212/22 S 3C-MP	200948970040
			AP212/26 S 3C-MP	200948980040

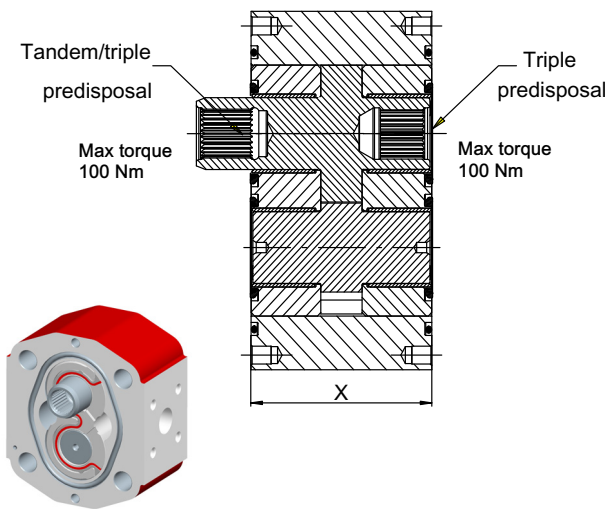


	15 - .59 (d) 40 - 1.58 (D) M6 (F)	15 - .59 (d) 35 - 1.38 (D) M6 (F)	AP212/4,5 S 2A-MP	200948910050	
			AP212/6,5 S 2A-MP	200948920050	
			AP212/8,5 S 2A-MP	200948930050	
	20 - .79 (d) 40 - 1.58 (D) M6 (F)		AP212/11 S 2B-MP	200948940050	
			AP212/15 S 2B-MP	200948950050	
			AP212/19 S 2B-MP	200948960050	
			AP212/22 S 2B-MP	200948970050	
	German 4 bolt flanged 287S-SAEB 24 - .95 (d) 55 - 2.17 (D) M8 (F)		15 - .59 (d) 35 - 1.38 (D) M5 (F)	AP212/26 S 2B-MP	200948980050
				AP212/219 S 2C-MP	200948960060
				AP212/22 S 2C-MP	200948970060
			AP212/26 S 2C-MP	200948980060	




* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

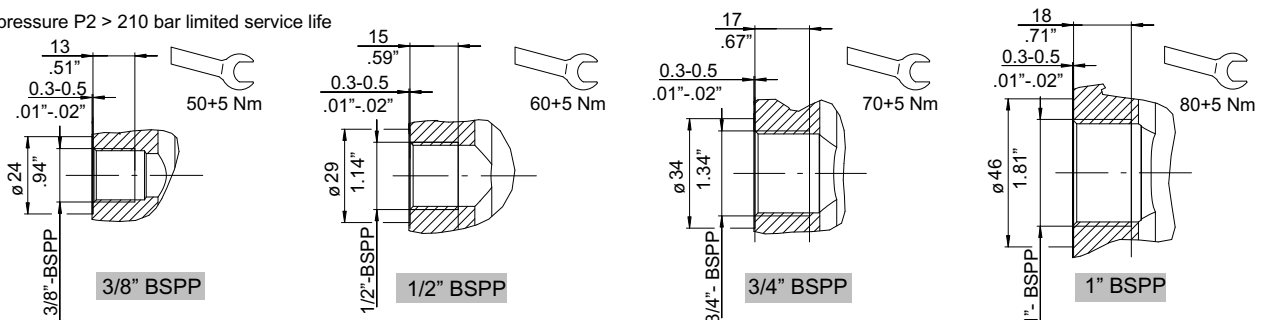
4.4.2 With shaft seal



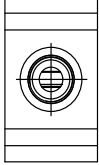
Displacement cm ³ /rev	X	
	mm	inch
4.5	48.6	1.91
6.5	51.6	2.03
8.5	54.6	2.15
11	58.6	2.31
15	64.6	2.54
19	70.6	2.78
22	75	2.95
26	81	3.19

Port type	Suction	Pressure	Description*	Ordering code (with shaft seal)
 BSPP threaded ports	3/8"	3/8"	AP212/4,5 S 4A-MPS	200948910070
	3/8"	3/8"	AP212/6,5 S 4A-MPS	200948920070
	3/8"	3/8"	AP212/8,5 S 4A-MPS	200948930070
	1/2"	3/8"	AP212/11 S 4B-MPS	200948940070
	1/2"	3/8"	AP212/15 S 4B-MPS	200948950070
	3/4"	1/2"	AP212/19 S 4C-MPS	200948960070
	3/4"	1/2"	AP212/22 S 4C-MPS	200948970070
	3/4"	1/2"	AP212/26 S 4C-MPS	200948980070

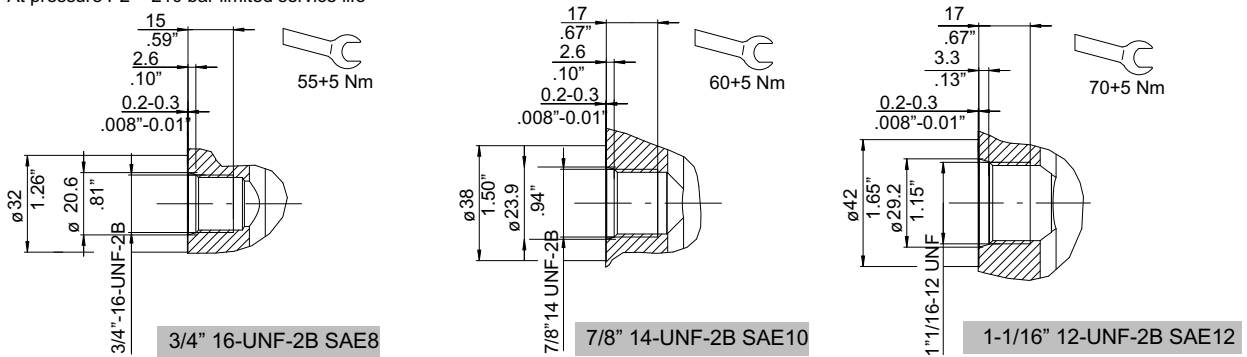
At pressure P2 > 210 bar limited service life

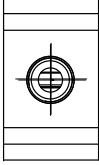


* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

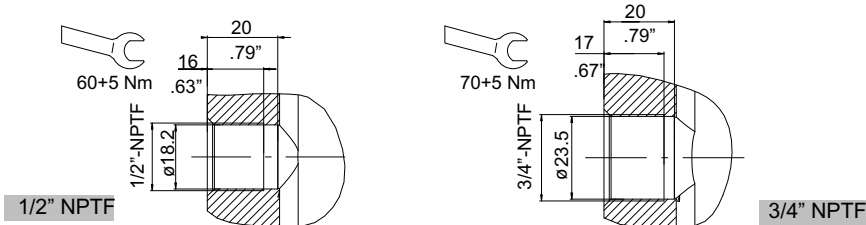
Port type	Suction	Pressure	Description*	Ordering code (with shaft seal)
 <p>SAE threaded ports</p>	1-1/16" 12UNF (SAE12)	7/8" 14UNF (SAE10)	AP212/4,5 S 8A-MPS	200948910080
			AP212/6,5 S 8A-MPS	200948920080
			AP212/8,5 S 8A-MPS	200948930080
			AP212/11 S 8A-MPS	200948940080
			AP212/15 S 8A-MPS	200948950080
			AP212/19 S 8A-MPS	200948960080
			AP212/22 S 8A-MPS	200948970080
			AP212/26 S 8A-MPS	200948980080

At pressure P2 > 210 bar limited service life

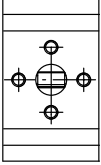


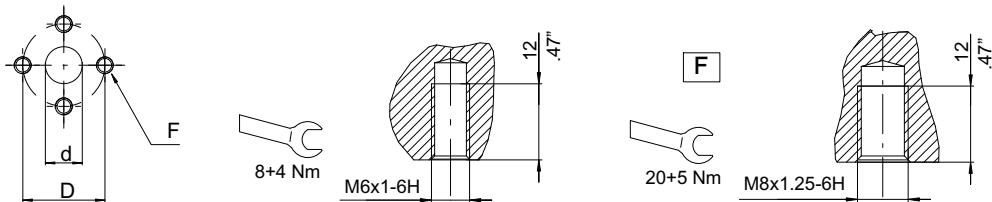
Port type	Suction	Pressure	Description*	Ordering code (with shaft seal)
 <p>NPTF threaded ports</p>	1/2"	1/2"	AP212/4,5 S 6A-MPS	200948910090
			AP212/6,5 S 6A-MPS	200948920090
			AP212/8,5 S 6A-MPS	200948930090
	3/4"	1/2"	AP212/11 S 6B-MPS	200948940090
			AP212/15 S 6B-MPS	200948950090
			AP212/19 S 6B-MPS	200948960090
			AP212/22 S 6B-MPS	200948970090
			AP212/26 S 6B-MPS	200948980090

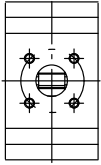
At pressure P2 > 210 bar limited service life

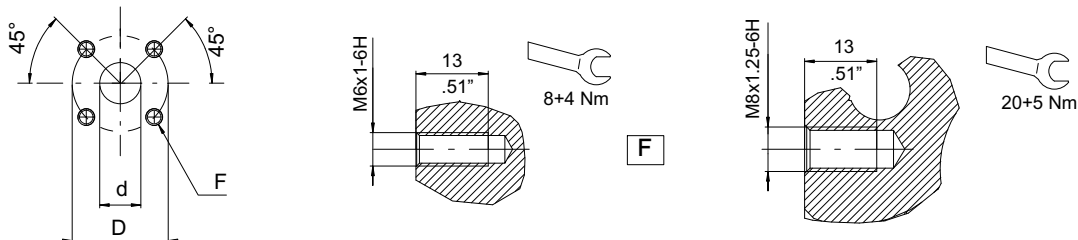


* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

Port type		Suction	Pressure	Description*	Ordering code (with shaft seal)
	European 4 bolt	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	AP212/4,5 S 3A-MPS	200948910100
				AP212/6,5 S 3A-MPS	200948920100
				AP212/8,5 S 3A-MPS	200948930100
		19 - .75 (d) 40 - 1.58 (D) M8 (F)	13.5 - .53 (d) 30 - 1.18 (D) M6 (F)	AP212/11 S 3B-MPS	200948940100
				AP212/15 S 3B-MPS	200948950100
				AP212/19 S 3C-MPS	200948960100
		19 - .75 (d) 40 - 1.58 (D) M8 (F)	19 - .75 (d) 40 - 1.58 (D) M8 (F)	AP212/22 S 3C-MPS	200948970100
				AP212/26 S 3C-MPS	200948980100



	German 4 bolt flanged	15 - .59 (d) 40 - 1.58 (D) M6 (F)	15 - .59 (d) 35 - 1.38 (D) M6 (F)	AP212/4,5 S 2A-MPS	200948910110
				AP212/6,5 S 2A-MPS	200948920110
				AP212/8,5 S 2A-MPS	200948930110
		AP212/11 S 2B-MPS		200948940110	
		AP212/15 S 2B-MPS		200948950110	
		AP212/19 S 2B-MPS		200948960110	
		AP212/22 S 2B-MPS		200948970110	
	German 4 bolt flanged 287S-SAEB	24 - .95 (d) 55 - 2.17 (D) M8 (F)	15 - .59 (d) 35 - 1.38 (D) M5 (F)	AP212/219 S 2C-MPS	200948960120
				AP212/22 S 2C-MPS	200948970120
				AP212/26 S 2C-MPS	200948980120

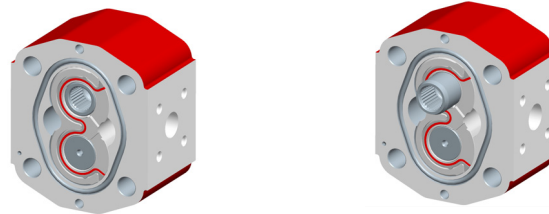


* Counter-clockwise rotation codes only. It is possible to change the rotation directions, see the instructions in section 4.5

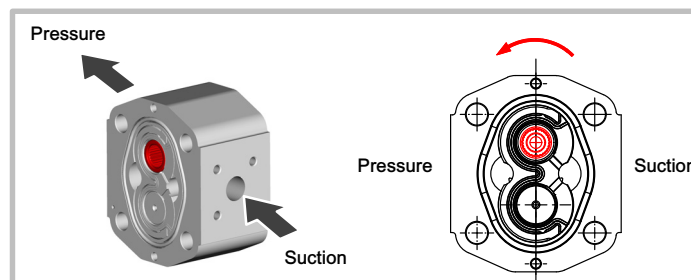
4.5 Rotation changing instructions

For the intermediate body Kit tandem/triple predisposal AP212 (or AP300 pumps) with unidirectional left or right rotation, it is possible to change the rotation direction of the entire range without having to replace any component. To ensure a good technical result, we recommend to operate in very clean ambient.

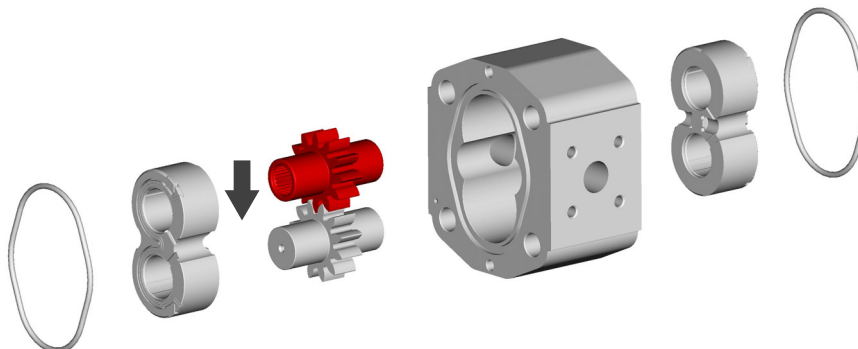
This operation must be performed by a skilled worker. In the following pictures, a procedure for the pump rotation inversion is shown (in this example, a counter-clockwise rotation pump S is changed into a clockwise-rotation one D).



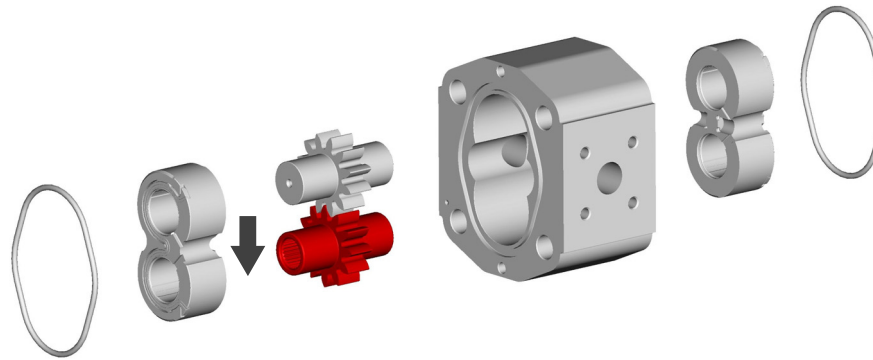
Initial configuration " Left" (S)



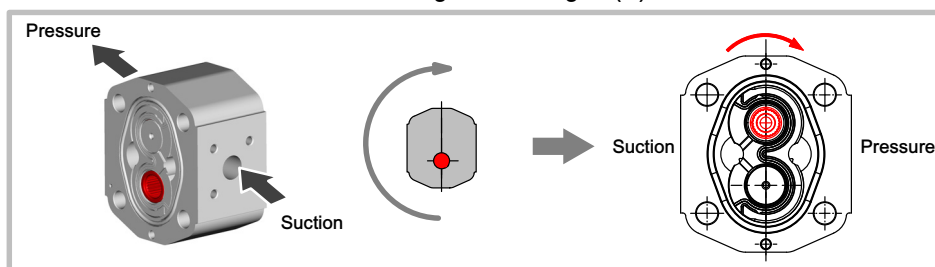
Picture -1-



Picture -2-



Final configuration " Right" (D)

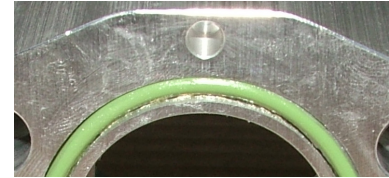
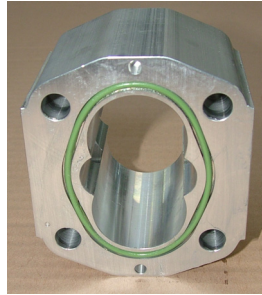


4.6 Warnings

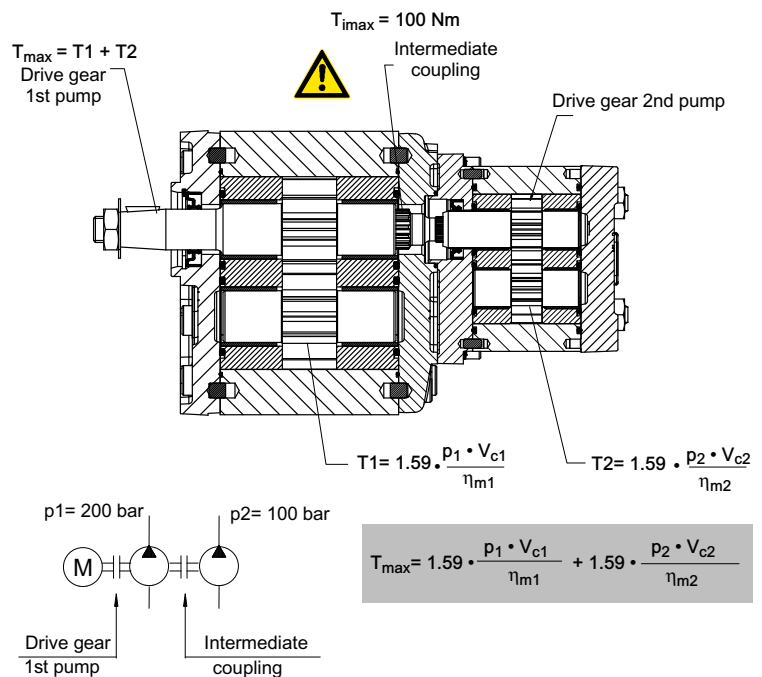


Attention:

1- During the assembly phase, pay attention to the correct body seals position.
 Help yourself using grease, to avoid the wrong positioning of the seals.
 The grease helps to maintain the seal in the correct position.
 Do not exceed with grease quantity; it might be pushed out of the body during the first operating working hours (especially when the oil is hot).



2- Pay attention to the maximum admitted torque, especially in presence of tandem or triple pumps.
 The max. admitted torque value does not depend only on gear shaft limits but also on the pump pressure limits.



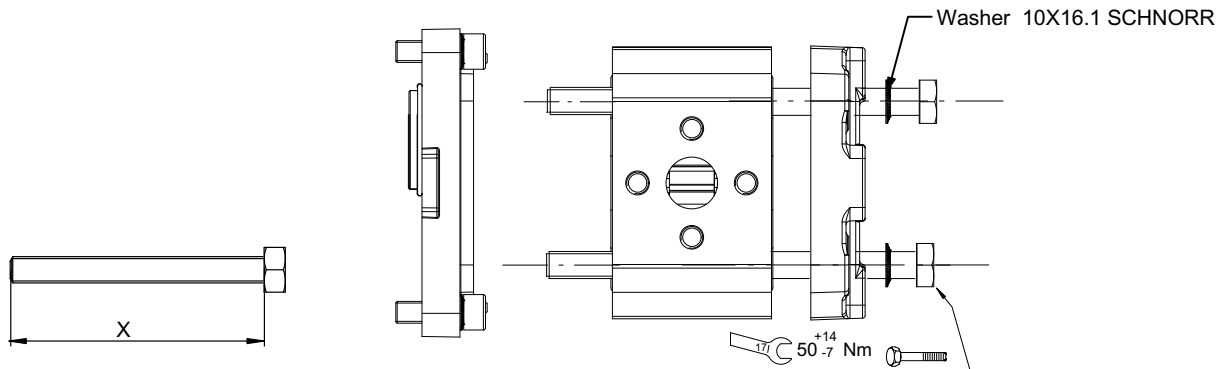
Example: AP300/45 + AP212/11

$$T_{\max} = 1.59 \cdot \frac{45 \cdot 200}{90} + 1.59 \cdot \frac{11.1 \cdot 100}{90} = 159 + 19.61 = 178.61 \text{ Nm}$$

$$T_{\max} = 178.61 \leq 230 \text{ Nm (taper 1:8)} \quad T_2 = 19.61 \leq M_{i\max} 100 \text{ Nm}$$

4.7 Screws

To combine AP300-FP + AP212-MP/MPS see AP212 standard end cover



Single pump		
Serie	Displacement	Lenght (mm)
218 818	4,5	80
	6,5	80
	8,5	85
	11	90
	15	95
	19	100
	22	105
	26	110

The length of the screws depends on the different pump displacement as well as the pump series (front and rear covers). Please consult our Sales Centre.



Attention:

In order to tight the bolts correctly, please be sure to use high quality steel bolts (such as 10.9 UNI5737) and to respect the suggested torque value.



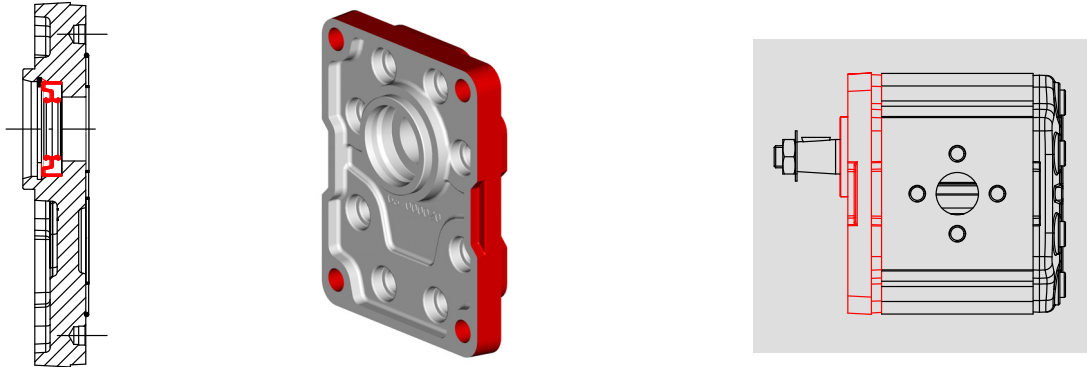
5 Sub-assembly components AP300-FP

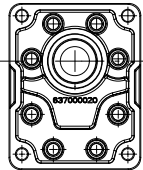
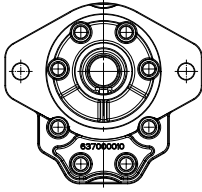
The front covers are supplied with shaft seal assembled, therefore no further operations are needed.

In order to avoid damages to the shaft seal during the assembly phase, it is necessary to use an appropriate ogiva adapter.

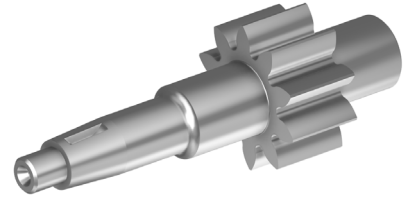
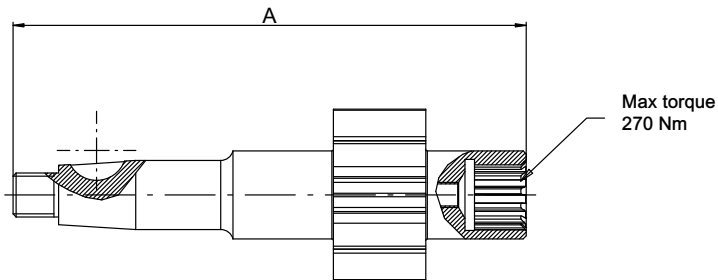
Be sure that the ogiva material, as well as its roughness, is not aggressive against the NBR shaft seal.

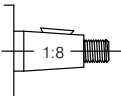
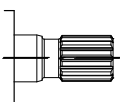
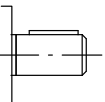
5.1 Sub-assembly front cover type



Type	Shape	Cast iron	
		Version	Ordering code
European rectangular (\varnothing 50.8 mm - 2" inch)		E	200737010070
SAE B (\varnothing 101.6 mm - 4" inch)		S	200737010010

5.2 AP300-FP shaft end codes



Shaft end type	Max torque	Displacement cm ³ /rev	A		Code
			mm	inch	
 Tapered shaft 1:8	T max = 230 Nm	27	151.6	5.97	200617310020
		31	154.2	6.07	200617320020
		38	158.8	6.25	200617330020
		45	163.4	6.43	200617340020
		53	168.6	6.64	200617350020
		63	175.1	6.89	200617360020
		75	182.9	7.20	200617370020
		93	194.6	7.66	200617380020
 13 teeth external spline SAE J 498-13T 16/32 DP	T max = 270 Nm	27	145.8	5.74	200617610020
		31	148.4	5.84	200617620020
		38	153	6.02	200617630020
		45	157.6	6.21	200617640020
		53	162.8	6.41	200617650020
		63	169.3	6.67	200617660020
		75	177.1	6.97	200617670020
		93	188.8	7.43	200617680020
 Straight keyed Ø 22.225 mm - 0.88 inches	T max = 185 Nm	27	145.8	5.74	200617010020
		31	148.4	5.84	200617020020
		38	153	6.02	200617030020
		45	157.6	6.21	200617040020
		53	162.8	6.41	200617050020
		63	169.3	6.67	200617060020
		75	177.1	6.97	200617070020
		93	188.8	7.43	200617080020

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Classification: 410.110.000